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ABSTRACT

With the increasing emphasis on the concept of career education, there is a need to integrate World of Work activities and existing vocational education programs. To achieve this, 279 teachers, teacher educators, state personnel, and industry representatives met to formulate objectives and to suggest specific action steps in each of nine areas. These areas were: (1) The Scope of Education in Agribusiness and Natural Resources Occupations, (2) Manpower Data and Training Needs in Agribusiness and Natural Resources, (3) Meeting the Needs of People in Target Groups, (4) Providing Occupational Experiences, (5) Guidelines for Developing and Using Student Performance Objectives, (6) Transitions In Organizations for Leadership Development In Students, (7) Preparing and Improving Professional Personnel, (8) Providing Instructional Programs For Adults, and (9) Providing Information and Obtaining Public Understanding. Forty-seven states and Puerto Rico were represented at this 4-day seminar. (JS)

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TRANSITIONS IN AGRICULTURAL EDUCATION

FOCUSING ON

AGRIBUSINESS AND NATURAL RESOURCES OCCUPATIONS

Report of a National Seminar
Conducted May 11-14 1971
Denver, Colorado

Division of Vocational-Technical Education
United States Office of Education
Department of Health, Education & Welfare

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INTRODUCTION

The impetus behind this paper stems from consideration of trends in two closely related aspects of the broad field of agribusiness and natural resources, namely: the occupations in which people engage; and the preparation or up-grading programs of education available to and/or enrolled in by youth and adults. The transitions were visible in the 1960's, and are gaining momentum in the 1970's.

The increasing number and diversity of occupations requiring knowledge and/or skill in agricultural science and technology are well known by those identified with this broad field. It is also worthy of note that enrollments in agricultural education programs at the secondary level in 1970 reached an all-time high of 550,823. The upward trend with respect to increasing offerings of programs other than those relating to agricultural production is revealed in a five-year comparison of enrollments. Whereas, in 1965 only 55,500 students were enrolled in off-farm agricultural production. In one year, 1969-70, post-secondary enrollments in these fields increased 34 per cent. Enrollment of adults remained strong, with 278,779 in upgrading, or continuing education courses.

As indicated in the title of this paper, agribusiness education includes preparation of individuals for employment in both agricultural production and the off-farm related business. It is conceived of as a blend of agriculture and business; a combination of the producing operations of a farm, ranch, greenhouse or nursery with the services associated with them, such as manufacture and distribution of agricultural equipment, fertilizers, and supplies, and the processing, storage, marketing, and distribution of agricultural commodities. The title also includes natural resources. The sources of manpower for all these occupations, and the students who are to prepare for these occupational fields are both urban and rural in background.

Since the early 1960's there has been a growing acceptance of "career education" or "education for the world of work" as a major component of total educational programs from kindergarten through and beyond the secondary school to adulthood. This concept places the focus on people. It provides for career information integrated into instruction through the sixth grade, and occupational exploratory experiences at the junior-high school or middle-school level. It stresses specialized occupational preparation, including supervised occupational experience at the upper secondary and post-secondary levels. Never, in the history of education in this country, has there been as general acceptance of a concept providing for total institutional concern and commitment for education for the world of work for *all* youth and adults as is now emerging.

Along with the emphasis of this concept on people, attention has increasingly been paid to persons in geographic areas previously inadequately served, and to "target groups", as well as to adults. This paper provides

objectives and suggested action steps to bring about transitions so that vocational education programs for occupations in agribusiness and natural resources will be a part of the career education concept.

These programs, whether based in local or area districts, belong to the public that supports them and benefits from them. Thus, public understanding is vital to expansion and improvement of them. The development and operation of these programs are entrusted to professional educators, together with the institutional governing boards and advisory committees at local, area and state levels. It should be quite apparent to these educators that transitions in education for occupations in agribusiness and natural resources call for changes in objectives, scope, basic information for program planning, curricular provisions and organizations for leadership and personal development.

It was against this background of trends and changes in educators' roles and responsibilities that the National Seminar on Agricultural Education in Transition was sponsored by the U.S. Office of Education for four days in May, 1971. This was attended by 279 persons from 47 states and Puerto Rico. These individuals included state staff personnel, teacher educators, and instructors from secondary and post-secondary schools. Representatives from a cross section of the industry of agriculture served as consultants.

The assembly was divided into nine committees, each of which was assigned a major aspect of transition and asked to state objectives and to recommend significant, realistic and specific action steps. Placement of responsibility for implementing these courses of action also was to be given attention. As a result of this part of the assignment, eight different national committees are recommended to be created, as well as a number of committees to be formed in the states. Three national seminars were recommended to be sponsored.

A follow-up meeting of a "coordinating committee" consisting of representatives of these nine committees was held by the U.S. Office of Education in early September, 1971. They were charged with improvement of the written reports and with articulating them with the overall purposes, and to deal with the relation of each to the report as a whole. This paper consists of the reports of the committees dealing with the nine aspects assigned. It is addressed to all those who have responsibilities for planning and development, for operation, and for evaluation of programs of education for occupations in agribusiness and natural resources.

THE SCOPE OF EDUCATION IN AGRIBUSINESS AND NATURAL RESOURCES OCCUPATIONS

Instruction in agribusiness and natural resources occupations should be offered in programs to people who can benefit from it at the elementary, middle, and secondary school levels, and at post-secondary, adult and university levels. Agribusiness education is broadly defined as:

> An organized instructional program involving the combination of the agricultural production and management operations and associated services, the manufacturing and distribution of agricultural equipment and supplies, the processing, storage, marketing and distribution of food, fiber and other agricultural commodities, the enviromental protection and wise use of renewable natural resources including air, forest, water, soil, animal, marine and plant life and recreational resources, also involving associated education and research in all these areas.

Specialized, supervised occupational experience, and the development of leadership, citizenship, cooperation and community development through the FFA are included as integral parts of the instructional programs at the appropriate levels. Examples of educational institutions providing instruction in agribusiness include:

- Local elementary, middle schools, and secondary schools
- Area secondary vocational centers
- Area post-secondary schools, and junior or community colleges
- Technical institutes and colleges
- Colleges and universities

General Purpose

The general purpose of education in agribusiness and natural resources occupations is to provide high quality education for all persons in all geographic areas preparing for employment in, for those employed in, and for those continuing education for these occupations. It includes all instruction requiring knowledge and skills in the broad field of agribusiness and natural resources, encompassing orientation , exploration beginning at the lower elementary levels, and specialized education at more advance levels. Such instruction should be commensurate with the employment, technological, social and economic needs of these occupations and of persons who may prepare for careers in them.

Major Goals

1. To maintain those current instructional programs that are at a high level of quality; to expand programs to reach all people who need and can profit from such instruction; and to expand such pro-

visions by adding new programs, and improving others to meet local and area needs.

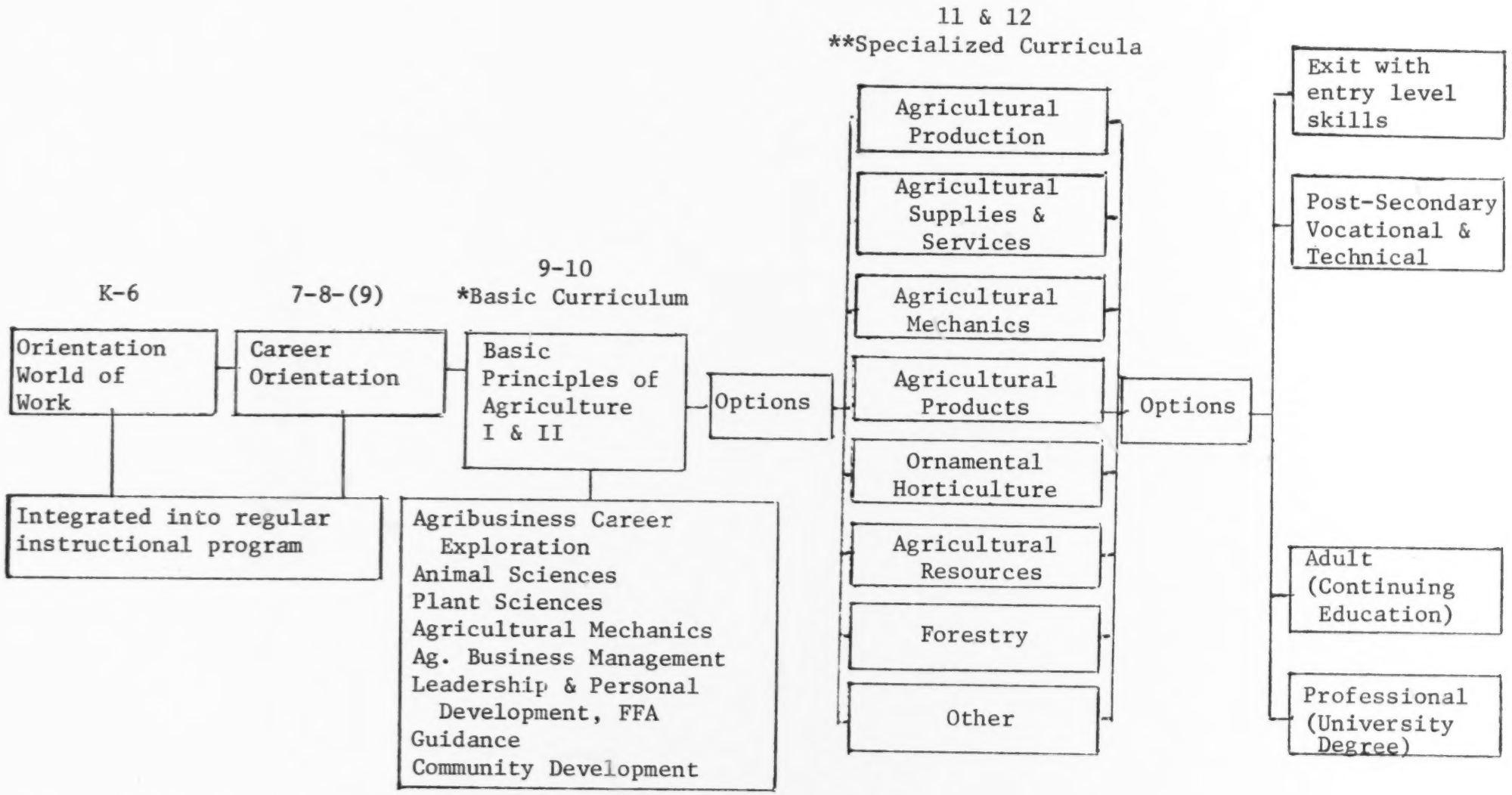
2. To provide career orientation and career exploration programs for all students at all levels that will acquaint them with employment possibilities in the world of work as it applies to education for agribusiness and the protection and wise use of natural resources.
3. To develop and conduct programs at secondary and post-secondary levels for youth and adults who are engaging in, or preparing to engage in such occupations.
4. To provide programs of continuing education for persons engaged in agribusiness occupations.
5. To develop those abilities in human relationships, leadership, citizenship, and community development needed in fulfilling occupational, social and civic responsibilities.
6. To provide training and experience for both youth and adults who are academically or physically handicapped or socially and/or economically deprived.

A suggested model for career education in agribusiness is presented in Figure 1.

Suggested Action Steps

- Provide world-of-work information and guidance in agribusiness and natural resources for students in K-6.
- Provide information on these occupations for career orientation to students in junior-high, or middle schools.
- Provide career exploration, information and guidance in these occupations for students in secondary schools.
- Provide organized instruction and supervised occupational experience* in basic plant and animal production, basic agricultural mechanics,basic leadership, and personal development to all 9-10 grade students electing such instruction, both urban and rural.
- Provide organized instruction and supervised occupational experience for 11th and 12th grade students in the following basic areas of instruction: agricultural production; agricultural supplies; agricultural mechanics and equipment; agricultural marketing; ornamental horticulture; forestry; agricultural resources and recreation; environmental protection; and other agriculture.
- Provide leadership and personal development through the FFA as an integral part of career education for all students enrolled in these agribusiness instructional areas at the secondary level.
- Provide education in conservation, leadership development, environmental management and recreation to serve in-school and adult population groups.

* See also section on providing Occupational Experiences, and section on Meeting the Needs of People in Target Groups.



* 1 - Includes provisions for disadvantaged and handicapped students
2 - Includes competencies common to most agribusiness occupations (on-farm and off-farm)
3 - Includes provisions for supervised occupational experience

** 1 - Emphasis upon individualized instruction and occupational experience in students' selected career areas
2 - Provisions for disadvantaged and handicapped students
3 - Provisions for FFA, and guidance as an intra-curricular phase

Figure 1 - Career Education In Agribusiness

- Provide post-secondary education programs for all students who can profit from and who desire to receive training for technical and other occupations in the agribusiness and natural resources occupations.
- Provide continuing preparatory and supplementary education programs for adults including: young farmers, adult farmers, agricultural workers in business, industry and services, and other workers preparing to enter, or who need retraining for entry into these occupations.
- Provide continuing leadership and personal development for those enrolled in post-secondary and adult instructional programs in the broad areas of agriculture.
- Develop an instructional program for training and retraining semi-skilled and skilled persons for occupations in environmental protection.
- Provide assistance and leadership to teachers in these occupational areas and to others in selecting, procuring, and using curriculum materials, and with the inter-change of such materials.
- Provide a comprehensive pre-service and in-service education program for personnel in education for agribusiness and natural resources.
- Provide information and activities to obtain public understanding of the status and progress of education for such occupations.
- Conduct program review for improvement and development.

The intent of agribusiness education at the various levels and desirable outcomes are given in Figure 2. Professional leadership at the national, state, and local levels should place high priority on the preparation of the necessary detailed materials, programs, and activities to meet the general objectives previously stated, and to implement the expanded programs of *career education* in agribusiness and natural resources.

Intent	Levels	Desirable Outcome
Orientation to world of work	Grades K-6	Student acquires awareness of, and a positive attitude toward work, school and increased knowledge of self in relationship to work.
Career orientation and exploration	Grades 7-8-(9)	Student grows in understanding of broad occupational areas and/or several occupational clusters.
Exploration, employability, and job* preparation	Grades 9-10	Student makes choice of occupational cluster for entry-level job preparation and for in-depth exploration.
Job* preparation, employment, job entry,	Grades 11-12	Student prepares for, and is satisfactorily placed in an entry-level job, or seeks further education and/or job preparation.
Job* preparation, job entry and adjustment	Post-Secondary	Student prepares for and satisfactorily enters a specific technical or skilled occupation or seeks further education and/or job preparation.
Job* preparation, upgrading job* entry and adjustment and progression	Continuing (Adult) Education	Student prepares for and satisfactorily enters a new occupation or updates and upgrades competence in existing occupational field.

* Includes self employment as an entrepreneur

Figure 2 - Intent of Agribusiness Education

MANPOWER DATA AND TRAINING NEEDS IN AGRIBUSINESS AND NATURAL RESOURCES

Previous successful efforts to obtain manpower data and information for education in agricultural occupations have identified mostly those knowledges and skills associated with the occupations in production. Attention in the future should, in addition, be directed toward meeting the challenge of the changing and increasing manpower demands of a dynamic agriculture-industry complex and environmental control. This is to be done through focusing on the identification of those occupational competencies for all job titles inherent in the broad and expanding spectrum of agriculturally oriented businesses. No other occupational area requires a greater diversity of skills and of levels of knowledge than does that in modern agribusiness and natural resources. A system for acquiring reliable data on manpower and on training needs would be facilitated by considering the objectives and suggested action steps that follow.

Objectives

1. To identify pertinent manpower data and training needs essential for educational program development in agribusiness and natural resources at all occupational levels.
2. To specify courses of action to implement a system for collecting manpower data and training needs data for these occupations, such that the information is in a form that is usable by those who are charged with development of curricular programs.
3. To identify operational procedures for translating manpower and training needs requirements into valid educational systems.
4. To synthesize guidelines essential for the coordination within the states, and articulation of these with national efforts in compiling manpower data and training needs to insure their compatibility.

Suggested Action Steps

- Determine the gross data on manpower and training needs through development of a standard taxonomy of occupational and job titles; estimation of numbers employed and projected job opportunities in those occupations requiring knowledge and skill in agribusiness; determination of level of training or qualifications for entry; and obtaining of information for guidance. A committee should be appointed by the AVA research committee and the inter-agency council to study currently completed research on manpower needs and develop a uniform procedure and appropriate instruments.
- Coordinate the study and survey efforts with the U.S. and State Employment Security Commissions and other agencies or organizations such as U.S. Bureau of Census, USDA and trade associations. State and Federal staffs would arrange conferences with personnel in these commissions and other agencies or organization concerned.
- Develop job descriptions and competencies needed through job analyses.

Performance objectives should be determined which the students must meet to qualify them for specific jobs*. States would be designated to make these job analyses through their curriculum laboratories, research coordinating units and graduate research programs.

- Develop programs in appropriate educational institutions, utilizing manpower data for community resource development. State personnel in vocational education would supply local and area institutions with pertinent information.
- Disseminate manpower data essential to local and area institutions for career exploration, and for guidance of students enrolling for vocational instruction. Student job placement procedures should be developed and implemented. Feed-back information from employers to a school placement office may provide manpower data and training needs. State personnel would be expected to make a concerted effort to supply school administrative and guidance personnel with manpower data and training needs.
- Follow up and evaluate programs of education for occupations in agribusiness and natural resources to provide a basis for determining the congruency of training with manpower requirements and needed adjustments. Consultant services would be provided at the state level.
- Coordinate state efforts and articulate them with national efforts in compiling and interpreting manpower data and training needs. A steering committee to coordinate state and national efforts would be established, with a staff member in BAVTE, USOE, to administer, coordinate and implement this joint effort.

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* See also the section on Guidelines for Developing Performance Objectives.

MEETING THE NEEDS OF PEOPLE IN TARGET GROUPS

Programs of instruction for occupations in agribusiness and natural resources should be planned not only with reference to manpower and training needs, but also in congruence with the needs of the people to be served. Special attention needs to be directed to certain target groups as, for example, the disadvantaged and the handicapped; those with special needs, such as ethnic and incarcerated; girls and women; and urban youth and adults. The educational provisions for these people should be made more visible to the public. The target groups that need special attention should be identified, and curriculums and new programs developed to reach those identified.

It is paramount that recognition be given to the human qualities of target groups which include the same basic needs and desires as persons in the more advantaged groups; and to the need for special preparation of teachers.

A different basis ought to be developed for financing of special programs for target groups; and for serving people so identified in geographic areas not now being served and who need training for agribusiness occupations.

Objectives

1. To identify persons not being served through typical programs, and to reveal their locations.
2. To improve the methods of identifying these persons.
3. To develop better procedures for motivating these target groups and getting them ready for education in agribusiness.
4. To appraise current educational programs to determine the extent to which these peoples' needs are being met.
5. To discover what new programs may be needed, what the curricula for these should be and to develop them.
6. To make these programs visible to the public.
7. To plan for preparation of certain teachers to teach target groups and for helping all teachers to handle various groups.
8. To plan in-service teacher and administrator education.
9. To prepare and provide special curriculum materials that are not currently available.
10. To develop "exemplary programs".
11. To develop administrative "machinery" at national, state, area and local levels to get programs initiated.
12. To determine what additional data may be needed to more clearly define the needs of target groups.

Suggested Action Steps

- Establish local, area, state and national systems to identify, locate and determine needs and to follow up perons in target groups. A request should be made to a foundation, government agency, or

organization for development of a systems model for this purpose.
- Survey the employment needs for persons in target groups according to competencies, levels, and salaries.* A system that would supply current information would need to be established.
- Establish a visible delivery system by appropriate state and national agencies that would make appropriate programs and curriculums available for target groups. To do this, personnel to be responsible for the system would have to be designated at the state, regional, and national levels.
- Initiate these new programs and curricula, and make them visible. This could be stimulated through provision of incentives for new programs.
- Provide trained personnel for target groups. Provision for this should be made through development of teacher education programs, both pre-service and in-service.**

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* See also the section of this report on obtaining manpower data and training needs.

** See also the section of this report on preparation of educational personnel.

PROVIDING OCCUPATIONAL EXPERIENCES

Occupational experience in agribusiness and natural resources are a basic and fundamental part of career education. This includes career orientation, career exploration, and specific occupational preparation through a supervised occupational experience program.

Programs of supervised occupational experience may be made up of one or more of the following: 1) entrepreneurship (programs) to include crops, livestock, or off-farm agribusiness enterprises owned and operated by the student; 2) improvement projects and skills in the areas listed under entrepreneurship; 3) cooperative work experience programs in agribusiness and natural resources, including cooperation with farmers, agricultural businesses, industries, organizations and agencies; and 4)experience programs developed in other training situations such as school laboratories, (school farm, agricultural mechanics laboratory, horticultural facilities, and/or in selected community settings complementing the normal class work) through a planned occupational experience program agreed to by the student, the parents, and the teacher.

The two major objectives for this phase are given, followed by suggested courses of action for attaining them.

Objectives

1. To work cooperatively with the teaching profession in developing specific objectives and materials for career orientation (k-6) and career exploration (7-8) (9)
2. To provide supervised occupational experiences through planned programs for all students enrolled in courses preparing for occupations in agribusiness and natural resources.

Suggested Action Steps

Career Orientation and Exploration

- Make members of the profession aware of the impact of the career education concept on curricula and instructional methodology at the elementary school level and at the junior high school or middle school level. These schools will need help to state objectives, determine content and identify community resources to support and enrich a program of career education. Those members of the profession, particularly at the local and state level, identified with agribusiness and natural resources should determine the kinds of specialized assistance they can give to principals and teachers, so that this broad occupational area can be included in orientation and exploration.
- Create a national committee to be of assistance in such an effort. The purposes would be to discover and disseminate information about the inputs being provided by members of the profession to career education programs at these levels and to suggest ways of coordinating such inputs. Members could serve a consultants to local school systems.

Supervised occupational experience Programs

- Establish committees in each state to include teachers, teacher educators and state supervisors to assist with transitions in this area. The following activities are suggested.
- Establish guidelines and standards for supervised occupational experiences in agribusiness. Attention should be given to; utilizing community resources; establishing and utilizing advisory committees; seeking and promoting variety in experiences; promoting flexibility in scheduling experiences, and providing for progression toward acquisition of marketable skills. Large blocks of time should be encouraged, including summer months, where appropriate. Principles and practices of successful cooperative education programs, including supervised practice programs, should be adapted.
- Organize and conduct pre-service and in-service programs to implement the guidelines, and qualify teachers to conduct occupational experience programs.
- Develop a position paper in support of policy for employment of teachers on a year-round basis, for scheduling blocks of time for supervision, and for teacher load.
- Review and recommend requirements for certification of teachers for occupational experience programs in agribusiness and natural resources.
- Publish State and Federal regulations regarding occupational experience programs for students.
- Establish an adequate reporting system to include types of occupational experience programs in agribusiness and natural resources, both at secondary and post-secondary levels. Appropriate forms should be developed.

GUIDELINES FOR DEVELOPING AND USING STUDENT PERFORMANCE OBJECTIVES

Emphasis on job performance has been traditional among effective agricultural educators. The focus has been largely on the student's own situations in the local community. In the future students will need to acquire competencies expected by employers in a wide geographical location and in a variety of situations. Programs of agribusiness are likely to be evaluated in terms of the extent to which performance objectives have been attained by persons receiving instruction in this area of your specialized career education.

Objective

To establish guidelines for developing student performance objectives on a nationwide basis, such objectives to be developed for each of the major instructional areas of agribusiness and natural resources.

Suggested Action Steps

- Appoint national performance objectives committee. One representative would be appointed by the chairman of each region, and one from the National Seminar Coordinating Committee. Funds for a national study should be obtained and a contract drawn with a state agency, or agencies, on a consortium basis, and necessary staff employed.
- Establish guidelines. The following are suggested categories.
  - Identify manpower needs and employment opportunities.* Local, area, state and national studies would be made.
  - Delineate agribusiness occupations by use of USOE taxonomy of agricultural occupations. The agribusiness occupations and clusters to be developed should be determined and priorities established.
  - Determine specific tasks to be performed by personnel in specific jobs and occupational clusters. The committee staff would articulate with leaders on state level staffs to identify specific tasks and performance characteristics; to arrange for collection, assembly, revision and validation of performance standards; and to devise a format and procedure for identifying and reporting specific tasks and performance expected of workers.
  - Place terminal performance objectives in sequence through structural analysis. In order to do this the sequence in which job tasks are to be performed would be analyzed, the competencies needed to be performed at a satisfactory level would be determined; the objectives would be organized into logical sequence for successful performance; and systematic evaluation would be made of individual programs by the use of appropriate advisory committees.

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* See also section of this report relating to Manpower Data and Training Needs.

- Determine standards of performance expected of students. These would be facilitated through making state and area surveys of selected employers and employees; and through using advisory committees, consultants and resource persons.
- Develop procedures and instruments for measuring student performance. Pilot studies would be made to determine procedures and instruments; and graduate studies in agribusiness and natural resources education would be initiated.**

** See also part of section on Training and Improving Professional Personnel, in relation to research

TRANSITIONS IN LEADERSHIP DEVELOPMENT ORGANIZATIONS FOR STUDENTS

Significant transitions have been made since the passage of the Vocational Education Act in 1963 in the leadership development organization of the FFA serving students at the high school level. These changes reflect the improvement and expansion of curricula designed to serve all students preparing for employment in the broad occupational area of agribusiness, including natural resources. This organization also has been changed to serve boys and girls of all races in urban as well as rural schools. Opportunities for growth in leadership, cooperation, citizenship, community development, and occupational pride and competency should be developed in the future in the entire spectrum of career education which ranges from kindergarten through secondary, post-secondary and adult education. This section deals with questions relating to appropriate adjustments in FFA or other organizations to serve students of agribusiness and natural resources. Specific recommendations for adjustments are presented.

Objectives

1. To identify the type of leadership development organization(s) to serve the broad spectrum of students enrolled in agribusiness and natural resources education in grades 7 thru 12 in both rural and urban America.
2. To recommend modifications and action steps in FFA to adequately serve students of agribusiness and natural resources.
3. To identify leadership development organizations needed at all levels as an integral part of the instructional program to insure participation of students in activities that develop leadership, cooperation, citizenship, occupational pride and competency and community development.

Suggested Action Steps

1. Request the National FFA Board of Directors to appoint the following national *ad hoc* committees to study the areas as identified and to implement recommended changes in 1972. A committee to make a thorough study of the FFA constitution, bylaws, aims and purposes, creed and ceremonies, and to submit appropriate changes for action by delegates at the 1972 National FFA convention. A committee to make a thorough study of post-secondary organizations now in existence, and to present recommendations to the Board of Directors for appropriate action. A committee to make a thorough study of collegiate membership and to present recommendations to the Board of Directors. A committee to study the advisability of seeking changes in Public Law 81-740 and to identify any such changes and procedures for implementing such legislation.
2. Take the following miscellaneous action steps. Recognize three kinds of membership: active, affiliate, and honorary. Any student enrolled in courses of agribusiness and natural resources may

be eligible for active membership in any chartered FFA chapter, and entitled to retain such membership throughout his or her secondary-school career, or until termination of the third national convention after graduating from or leaving the secondary school. Change the name, Future Farmers of America to "FFA: The Nation Organization of Youth Preparing and Advancing in Careers in Agribusiness and Natural Resources." Change contests and awards so as to adequately reflect the instructional program, or eliminate them at the national level. Recognition of award winners should be based on accomplishments only. The existing restriction of "one year following high school" should be retained on all proficiency award applicants.

- Have persons at the State and National levels in charge of education in agribusiness and natural resources serve as advisors of the State FFA Associations and National Organization respectively, with qualified persons to serve as deputy advisors or executive secretaries at each level.
- Establish committees at all levels to develop and further improve the image of FFA, and a public relations plan to fit the broadened concept*. The communications system of the National FFA staff to state leaders should be expanded, and higher priority items sent to all local and area chapters by the respective advisors.
- Make available affiliate memberships such as junior; post-secondary; collegiate--4-year teacher education students--; adults and alumni; with each state having the right to determine the names of the respective affiliate membership.
- Establish in each state a committee of the state agriculture teachers' association to serve in an advisory capacity to the State FFA Association.
- Change or re-write the FFA creed; the FFA rituals; and minimum standards for the greenhand, chapter and state degrees to reflect the total program of agribusiness education. Each state association should be empowered to determine the names of the local and state degrees. Minimum standards and appropriate name also should be developed for the degree presented by the national organization.
- Empower state associations to determine the quota or state degrees to be presented, and remove the quota for the "National" degree.
- Develop realistic qualifying standards for the "National" degree.
- Broaden and make the FFA constitution and bylaws more flexible to provide each state maximum opportunity to develop its own constitution and bylaws designed to meet specific in-state needs of students.

3. Make the detailed suggestions and recommendations developed at the Denver Seminar available to the National FFA Board of Directors for consideration by the various *ad hoc* study committees recommended in this section.

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* See also the section on Providing Information and Public Understanding.

PREPARING AND IMPROVING PROFESSIONAL PERSONNEL

This section deals with both pre-service preparation and in-service improvement of personnel. Special aspects receiving treatment are recruitment of trainees, which has always been a problem, and the preparation of advisors of student organizations for leadership and personal development. Inasmuch as research has been a traditional function of most staffs of teacher education for agribusiness and natural resources occupations, that function is dealt with. The four general objectives relating to these functions follow.

Objectives

1. To encourage appropriate recruitment and retention efforts so as to provide as adequate supply of professional, technical, supporting, and specialist personnel who are capable and well prepared to conduct career education programs at all grade levels for occupations in agribusiness and natural resources, including such clusters as agricultural production, agricultural mechanics, agricultural products, ornamental horticulture, forestry and agricultural resources.
2. To enhance and develop pre-service and in-service instructional programs based upon a wide range of technical and professional competencies needed by instructors for agribusiness and natural resources occupations.
3. To promote and plan appropriate training and experience in teacher education to develop competencies needed for advising student organizations, and for leadership development.
4. To stimulate adequate funding and coordination of research, and to emphasize the development of competencies in locating and utilizing research results related to education for careers in agribusiness and natural resources.

Suggested Action Steps

Recruitment and retention

- Continue the national recruitment commission. It should establish and publish needs within states and on the national level. State leaders should establish and maintain a state-sponsored, recruitment committee. It should continue utilizing efforts of instructors to identify prospective teachers, and efforts of current trainees to recruit future trainees.
- Maintain a high standard for selection of candidates on the part of teacher education institutions. Prospective instructors should be advised as to the opportunities available in education for agribusiness and natural resources.
- Publish a brochure, designating opportunities in agribusiness and natural resources, with emphasis on the opportunities presented in teaching should be publicized to employees in these businesses.

- Stimulate retention of instructors through encouraging active involvement with professional teachers organizations.
- Help establish a realistic teaching load for teachers. Conduct systematic follow up of beginning instructors to help maintain their morale.

Pre-service preparation of certified (degree) teachers, teacher aids, technicians, and specialists.

- Develop a wide variety of modules to be used by individuals to meet their educational needs. Examples would be in such areas as methods of instruction, program planning, supervised occupational experience in occupations to be taught, and professional experience in teaching and related activities. Teacher behavioral objectives and performance levels should be identified.
- Obtain sponsorship of a natural seminar by the U.S. Officer of Education for the purpose of developing guide lines for these modules.

In-service teacher education

- State supervisory staffs and teacher education staffs cooperate in planning short-range and long-range programs of in-service education. Such plans should be based on professional and technical competencies, needed by all instructors at all levels who are involved in career education for agribusiness and natural resources occupations.
- Include inputs such as the innovative uses of educational media, better communicative technology, and professional and occupational experiences for teachers in accordance with their background and needs.
- Make use of internships, practicums and workshops for teachers to acquire additional occupational experiences.
- Plan experience programs to provide individuals, who are entering the teaching profession, under a contract agreement, a means of acquiring adequate professional experience.
- Make services of consultants and resource persons available for teachers in service.
- Maintain close coordination of the youth leadership component and the teacher education program to assure utilization of students in operational aspects of youth organizations. This may be facilitated through joint meetings of state staffs and teacher educators.
- Become involved, when appropriate, with state, regional, and national meetings of post-secondary and adult student groups.
- Schedule a national seminar for teacher educators who are directly involved with collegiate student organizations and/or those involved in providing instructions on student organizations. Such

a seminar should be planned by the National FFA staffs in consultation with the state FFA staffs and teacher educators. The possibility of funding through EPDA or FFA Foundation should be investigated.

Preparation for responsibilities in advisement of student organizations.

- Teacher education institutions initiate and/or evaluate existing collegiate student organizations in terms of experience for developing competencies needed for advising student organizations.
- Provide students enrolled in teacher education institutions with participating experiences in operation of collegiate student organizations. They should also receive direct experiences with secondary and/or post-secondary student organizations during student teaching.
- Use college courses and experiences related to student organizations and integrate them with the instructional and occupational experience program. Those which could meet individual leadership needs would be identified by teacher educators.

The research function.

- Place emphasis on development of competencies in locating and utilizing results of research related to education for careers in agribusiness and natural resources. Teacher education modules or packages should be prepared for present and prospective teachers relating to locating and using research results. "Hands-on" experience should be provided.
- Procure funds for research relating to occupations in agribusiness and natural resources. State leaders should exert an influence on the ear-marking of funds for research and development in these fields. A long-range commitment should be sought.
- Take steps: 1) to provide staff for conducting research and development activities through legitimizing such activities in the state plans and in educational institutions, and 2) to get state research coordinating units involved. Coordination of research efforts among the states should be brought about through scheduling and participating in regional and national conferences or seminars on research in education for these occupational fields.

PROVIDING INSTRUCTIONAL PROGRAMS FOR ADULTS

This section deals with the task of providing for and improving programs for people who have left or graduated from a school as full-time enrollees, who are employed or desire full-time employment, and who may be available for instruction, usually on a part-time basis. There is no phase of education for occupations in agribusiness and natural resources that is more diverse as to the heterogeneity of clientele and the variety of occupational needs and situations.

Two sets of objectives are presented: the first relating to manpower needs and people to be served; and the second relating to expansion and improvement of educational programs. The second set of objectives will serve as a basis for suggested activities and steps for carrying them out.

Objectives Relating to Meeting Manpower Needs and Clientele to be Served.

1. To provide preparatory and continuing education for those who wish to enter, or are preparing to enter occupations in agricultural production and marketing either as entrepreneurs or as employees.
2. To provide preparatory and continuing education for entry into, or for up-grading of people either as entrepreneurs or as employees in other agribusiness and natural resources occupations.

Objectives Relating to Expansion and Improvement of Educational Programs

1. To develop ways and means of expanding and extending educational programs to all adults who need and can profit from them.
2. To make adequate provisions for recruiting and training instructors for adults in agribusiness and natural resources occupations.
3. To improve and expand curriculum materials for use in these programs.
4. To plan for evaluation and improvement of adult education programs.
5. To plan for assistance in leadership and personal development in instruction-related, adult organizations.

Suggested Action Steps

- Local, or area administration promote expanded and extended educational programs for adults through:
  - Studying the need for such programs for adults in the area being served;
  - Fostering greater community and student acceptance of the programs;
  - Developing short-term and long-term plans for those types of programs;
  - Providing for flexibility to meet the diverse needs of the clientele;

  - Providing and using appropriate channels of communications;
  - Arranging for adequate finances for appropriate programs;
  - Utilizing advisory committees when preparing short-time and long-time plans for adult education in local and area schools; and
  - Utilizing school curriculum committees to help eliminate or avoid overlapping or duplication and to promote articulation.
  - Local and area administrators working for improvement of the instructional personnel aspect through obtaining well qualified instructors, and improving the use of teacher time.
- Provide special classes, workshops and seminars to up-date instructors in methods and technology; and provide pre-service training for adult class instructors. Working with local administrators, state leaders should develop local and state policies on teacher load. Encouragement needs to be given to the use of specialists in specific areas drawn from business and industry, and other teachers having specialized background training.
- State leaders engage in activities designed to develop and improve the curriculum for adults.
- Form state committees to determine kinds of curriculum materials needed, and a staff position established and filled by a person professionally prepared for development of curruculum materials.
- Local and area personnel, as well as persons in state leadership, assist in evaluation and improvement of local and area adult education programs. Guidelines should be developed and made available to aid in periodic and terminal evaluation of programs in effective supervision.
- Provide leadership and personal development for adult student groups that are organized in close relationship with instruction appropriate to their needs. State and local, or area leaders could assist in and promote leadership development among adults in closely related organizations.

PROVIDING INFORMATION AND OBTAINING PUBLIC UNDERSTANDING

A vastly improved public information program is needed, based on a positive approach to education for careers in agribusiness and natural resources. Sufficient information should be made available for dissemination to three publics: those with in-puts to programs, beneficiaries of the out-puts from the programs, and the supporters of these programs. The objectives of efforts in this communication sector follow.

Objectives

1. To determine what needs to be communicated.
2. To select or assign individuals or groups who should be responsible for communications.
3. To select or develop most effictive means or media for communication.
4. To identify groups and individuals to whom communications should be directed.

Suggested Action Steps

Substance of Communications

- Follow recommendations contained in the section on manpower data and training needs. Information should be drawn from the census; from USOE and USDL reports; from records of those being trained, and their records in placement, and information concerning costs and returns, capability levels of students, and marketing research.
- Include in communications to the "in-put group" the identification of careers and outlook for them, nature of the work, and nature of the educational programs at the secondary and post-secondary levels.
- Make clear through communications to the out-put group the scope of education for agribusiness and natural resources, the benefits in terms of manpower, both preparatory and upgrading, and community improvement.
- Reveal in communications to supporting groups the place of programs in total career education, the benefits to society, the cost, the alternative to strong career education programs, and the importance of public support and involvement.

Responsibilities for Communications

- Get local and area administrators and state leaders involved in communication activities. Related groups and individuals include local, area, and state advisory committees, the FFA, and the national professional organizations.

Means of Communication

- Have communication procedures include person-to-person involvement of representatives of the various publics, company internal

publications, mass media, tours, and exhibits at conventions.
- Secure sponsorship by the U.S. Office of Education of a national seminar on public information for designated individuals in each state responsible for such programs of communication and/or public relations.
- At the state level conduct pre-service and in-service teacher and administrator education programs particularly relating to methods and materials, news releases, cooperation with organizations and work with local, area, and state agencies.
- At the local and area levels administrators and instructors provide informational material for mass media, utilize student organizations, and achieve balance in public information to avoid over-emphasis on any aspect or neglect of any phase.

Beneficiaries of Communications

- Clearly identify in all those responsible for the communications activities:
  - Those with inputs to the program, e.g. students and prospective students, parents, school administration and faculty, and teacher education.
  - Those who are the beneficiaries of the outputs from the programs, e.g. the business, and labor community, the agribusiness industry, and parents.
- Those who are, or could be supporters of these programs, including taxpayers, the general public, the local or area board of education, the state board, local, area and state advisory committee, and others.